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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/753,944	01/03/2001	Barry L. Phillips	BASLIP2023	3112

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[REDACTED] EXAMINER

SORKIN, DAVID L

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

1723

DATE MAILED: 10/07/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/753,944	PHILLIPS, BARRY L.	
	Examiner	Art Unit	
	David L. Sorkin	1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 18 July 2002.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-9, 11-17, 20-24 and 32-48 is/are pending in the application.
 - 4a) Of the above claim(s) 32-42 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-9, 11-17, 20-24 and 43-48 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ .
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .	6) <input type="checkbox"/> Other: _____ .

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 1-31 in Paper No. 7 is acknowledged.

Claim Objections

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires that when new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered new claims 32-37 been renumbered 43-48.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 17, 20-22 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 17 appears to contradict base claim 8, because claim 17 required the chord line of the wing to be parallel to the duct, while claim 8 requires "an angle of from about 5 degrees to about 20 degrees from parallel". Also, in claim 17, "a chord line a chord line" should read - - a chord line - -; and in claim 20, line 3, after "edge", - - of - - should be inserted.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-7 and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by Medsker (US 3,671,208). Regarding claim 1, Medsker ('208) discloses a system comprising a duct (11/30) defining an interior passageway; a wing (13/33) in the duct the wing arced between a leading edge (16/33) and a trailing edge (17/34) (see Figs. 1 and 3; col. 3, lines 1-5 and 40-46); and a nozzle (see dashed lines in Fig. 1; col. 3, lines 5-18) disposed within the interior passageway of the duct. Regarding claim 2, the nozzle is disposed adjacent the trailing edge of the wing beyond the wing (see Fig. 1). Regarding claim 3, the wing is capable of generating lift (see shape of wings in Figs. 1 and 3). Regarding claim 4, the wing is configured to shed a vortex (15) at a point on the trailing edge of the wing. Regarding claim 5, the nozzle is positioned adjacent a first end of the trailing edge of the wing where the vortex is shed (see Figs. 1-4). Regarding claim 6, the wing is suspended within the interior passageway (See Figs. 1-11). Regarding claim 7, the wing is attached to the inner surface of the duct and extends into the interior passage of the duct (see Figs 1-11). Regarding claim 47, Medsker ('208) discloses a plurality of wings within the interior passage of the duct, each of the plurality of wings arced between a leading edge and a trailing edge (see embodiment of 6, 10 and 11).

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7. Claims 1-7 and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by Holzbaur (US 4,079,718). Regarding claim 1, Holzbaur ('718) discloses a system comprising a duct (1) defining an interior passageway; a wing (any or 2, 4, 5, 14, 15, 22 or 25) in the duct the wing arced between a leading edge and a trailing edge (see Figs. 1-5); and a nozzle (12) disposed within the interior passageway of the duct. Regarding claim 2, the nozzle is disposed adjacent the trailing edge of the wing beyond the wing (see Fig. 1-5). Regarding claim 3, the wing is capable of generating lift (see shape of wings in Figs. 1-5). Regarding claim 4, the wing is configured to shed a vortex at a point on the trailing edge of the wing (see Figs. 1-5). Regarding claim 5, the nozzle is positioned adjacent a first end of the trailing edge of the wing where the vortex is shed (see Figs. 1-5). Regarding claim 6, the wing is suspended within the interior passageway (see Figs. 1-5). Regarding claim 7, the wing is attached to the inner surface of the duct and extends into the interior passage of the duct (see Figs 1-5). Regarding claim 47, Holzbaur ('718) discloses a plurality of wings within the interior passage of the duct, each of the plurality of wings arced between a leading edge and a trailing edge (see Fig. 5).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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9. Claims 8, 9, 10-17, 20-24, 43-46 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Medsker (US 3,671,208). Regarding claim 8, 45 and 46, Medsker ('208) discloses a system comprising a duct (11/30) defining an interior passageway; a wing (13/33) in the duct the wing arced between a leading edge (16/33) and a trailing edge (17/34) (see Figs. 1 and 3; col. 3, lines 1-5 and 40-46); and a nozzle (see dashed lines in Fig. 1; col. 3, lines 5-18) disposed within the interior passageway of the duct. Medsker ('208) fails to disclose a numerical value for the angle of the wing; however, such an angle is recognized as a parameter to be selected (see col. 2, lines 8-13; col. 3, lines 46-50; Fig. 1). Therefore, as held in *In re Aller*, 105 USPQ 233,235 (CCPA 1955), "where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges through routine experimentation". Regarding claim 9, the wing is capable of generating lift (see shape of wings in Figs. 1 and 3). Regarding claim 11, the wing is a cambered wing (see Figs. 1 and 3). Regarding claim 12, the wing is a substantially arcuate airfoil (see Figs. 1 and 3). Regarding claim 13, the wing is a cambered wing having a chord line defined as a substantially straight line extending from the leading to trailing edge and chamber line defined as a substantially arced line extending from the leading to trailing edge (see Fig. 1). Regarding claims 14 and 15, it is considered that it would have been obvious to one of ordinary skill in the art to have made the wing of rigid material such as sheet metal to withstand the force of gas flow. Regarding claim 16, the wing is an airfoil with a camber line arced from the leading to trailing edge of the airfoil (see Fig. 1). Precise consideration of claims 17, 20-22 and 24 due to their self-contradictory nature

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discussed above with regard to section 112. Regarding claim 17, the airfoil being substantially parallel to the duct is depicted in Fig. 3. Regarding claim 20, the airfoil is operable to shed a vortex at a point on the trailing edge of the airfoil (see Figs. 1 and 3). Regarding claim 21, the nozzle is positioned adjacent the point of shedding (see Fig. 1). Regarding claims 22 and 24, the disclosed system of Fig. 1 is capable of operating in both the claimed manners. In the intended use described by the reference the material from the nozzle flows away from the wing. Regarding claim 23, at least one nozzle is positioned adjacent a point on the wing where the vortex is shed (see Fig. 1). Regarding claim 43, the wing is arced between a leading edge (16, 33) and a trailing edge (17,34) along and upper surface (18,35) of the wing. Regarding claim 44, the wing is arced between a leading edge (16) and a trailing edge (17) along both upper and lower surfaces of the wing (see Fig. 1). Regarding claim 48, a plurality of wings are disposed in spaced apart relationship in the duct (see embodiments of Figs. 6, 10 and 11).

10. Claims 8, 9, 10-17, 20-24, 43-46 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holzbaur ('718). Regarding claim 8, 45 and 46, Holzbaur ('718) discloses a system comprising a duct (1) defining an interior passageway; a wing (any or 2, 4, 5, 14, 15, 22 or 25) in the duct the wing arced between a leading edge and a trailing edge (see Figs. 1-5); and a nozzle (12) disposed within the interior passageway of the duct. Holzbaur ('718) fails to disclose a numerical value for the angle of the wing; however, such an angle is intended to be adjusted (see col. 6 line 30 to col. 7 line 5; Figs. 1-5 and 8). Therefore, as held in *In re Aller*, 105 USPQ 233,235

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(CCPA 1955), "where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges through routine experimentation". Regarding claim 9, the wing is capable of generating lift (see abstract, Figs. 1-5). Regarding claim 11, the wing is a cambered wing (see Figs. 1-5). Regarding claim 12, the wing is a substantially arcuate airfoil (see abstract, Figs. 1 -5). Regarding claim 13, the wing is a cambered wing having a chord line defined as a substantially straight line extending from the leading to trailing edge and chamber line defined as a substantially arced line extending from the leading to trailing edge (see Figs. 1-5). Regarding claims 14 and 15, it is considered that it would have been obvious to one of ordinary skill in the art to have made the wing of rigid material such as sheet metal to withstand the force of gas flow. Regarding claim 16, the wing is an airfoil with a camber line arced from the leading to trailing edge of the airfoil (see Fig. 1-5). Precise consideration of claims 17, 20-22 and 24 due to their self-contradictory nature discussed above with regard to section 112. Regarding claim 17, the airfoil being substantially parallel to the duct is depicted in Fig. 2 and (in dashed lines) in Fig. 1., for example. Regarding claim 20, the airfoil is operable to shed a vortex at a point on the trailing edge of the airfoil (see Figs. 1-5). Regarding claim 21, the nozzle is positioned adjacent the point of shedding (see Fig. 1-5). Regarding claims 22 and 24, the disclosed system of Figs. 1-5 is capable of operating in both the claimed manners. Regarding claim 23, at least one nozzle is positioned adjacent a point on the wing where the vortex is shed (see Fig. 1-5). Regarding claim 43, the wing is arced between a leading edge and a trailing edge along and upper surface of the wing (see Figs. 1-5).

Regarding claim 44, the wing is arced between a leading edge and a trailing edge along both upper and lower surfaces of the wing (see Figs. 1-5). Regarding claim 48, a plurality of wings are disposed in spaced apart relationship in the duct (see Fig. 5).

Response to Arguments

11. Applicant's arguments are moot in view of the new grounds of rejection.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See especially Ruscheweyh ('768) and Wang et al. ('063) regarding wing angle in ducts.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Sorkin whose telephone number is 703-308-1121. The examiner can normally be reached on 8:00 -5:30 Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 703-308-0457. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



David Sorkin

October 3, 2002



CHARLES E. COOLEY
PRIMARY EXAMINER